

The Boston Medical and Surgical Journal

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Original Articles.

THE ARMY TUBERCULOSIS PROBLEM AS SEEN IN MASSACHUSETTS.

By JOHN B. HAWES, 2ND, M.D., BOSTON.

ACCORDING to the latest figures that I have been able to obtain, dated May 19, 1919, there were 1604 Massachusetts men during the years 1917, 1918, and part of 1919, either rejected under the Selective Service law of the draft or discharged from the various camps, on account of tuberculosis. In order to get information as to how much of a problem, as far as the State of Massachusetts was concerned, there existed in regard to these men, I made detailed personal inquiry of each of the local boards of health throughout the State. The State Department of Health has confirmed the figures thus obtained, while from the Massachusetts Red Cross I have received further help; and finally, from the office of the Surgeon General at Washington, I have received additional figures. From various private sanatoria, and other institutions, I have obtained facts bearing on the case. My own investigations do not cover the entire State as sufficient time has not yet elapsed to allow of the collection of up-to-date figures in every locality. I have, however, fairly accurate knowledge from all the cities of Massachusetts, and eleven of the largest

towns, amounting to over 90% of the total population.

From this group of towns and cities, there were 1566 men rejected by local draft boards, concerning whom I have some information. Many of these men, of course, were known to be tuberculous by local authorities before they were drafted, and their rejection was but a matter of form; a considerable number, however, were new cases. There were 491 who were definitely stamped as cases of tuberculosis by local draft boards, the remainder being classified as suspicious, sufficiently so to call for their rejection. At the present time there are 548 out of these 1566 men concerning whom local authorities can give no information. These men have either left the State, or have gone to some other locality, or, as is more apt to be the case, there has been no thorough or energetic search to find out what has become of them. One hundred and ten of the original number have died. Of 622 men, concerning whom I have fairly definite information, 500, something over 80%, are working and apparently in good condition; 431 of these are under supervision by local authorities; there are 28 who are known to be working and in poor condition, and 43 are at the various sanatoria,—state, county, and municipal. I have been able to discover only 42 Massachusetts men who have been discharged from the service

on account of tuberculosis. Of these 42, 29 are under supervision, either at home or in local or private sanatoria, and 11 are in state sanatoria. Here then is a group of 1566 men of whom 491 (30%) are definitely called tuberculous, 548 (35%) have disappeared, while the others are called "suspicious cases."

In looking over these figures I at once asked myself the questions, "What constitutes a war tuberculosis problem from the point of view of the State and is a war tuberculosis problem in any way different from a peace tuberculosis problem?" I cannot see that it is. The war with its wholesale examination of men coming under the draft age has undoubtedly called to our attention many hitherto undiscovered tuberculosis cases, latent or active. It has done this in the same way that any survey properly carried out would do; in Massachusetts the results of the surveys of Barnstable County and of the cities of New Bedford and Cambridge, as well as the intensive work in Framingham, have shown that there exists, and probably always will exist, a certain number of cases of tuberculosis which were hitherto unknown. I cannot see that the discovery of patients, the results of an examination carried on as a war measure, in any way differs from the results of similar work carried on in peace time or by civilian authorities.

As far as the men discharged from the Army for tuberculosis are concerned, here again, except in the comparatively few cases handled by the War Risk Insurance Bureau, the State of Massachusetts has little if anything to do with the matter. Such men are automatically sent to Fort Bayard or to some other Army sanatorium and are kept there until their future is assured one way or another. Soldiers coming under the War Risk Insurance Bureau have been handled so simply and so easily in Massachusetts as to constitute no problem whatsoever. In a talk two days ago with the chief of the Massachusetts Red Cross I was given definite assurance, and permission to quote the statement, that from the point of view of the Red Cross in Massachusetts there has not been the slightest difficulty in handling the tuberculous soldiers or their families coming under the supervision of that organization. Some time ago I assured the Red Cross authorities that I would guarantee to place in some suitable institution within 24 hours notice any patient

they might ask me to handle. I have had no difficulty in so doing.

There are, however, certain situations which have arisen as a result of the war which we did not realize to have existed before. For instance, the Red Cross assured me that the chief problem it had to meet as far as tuberculosis was concerned was not the question of available beds in sanatoria or hospitals for their patients, but how to get the knowledge to local authorities, whether boards of health or Red Cross representatives, as to how to take advantage of these vacant beds and of other means of disposal already available. It has certainly impressed on me, for instance, that it is important for any State as a part of its method of handling tuberculosis to publish a bulletin at least once a year, and to see that such bulletin receives the widest publicity and is couched in the simplest and plainest language concerning the facilities not only for diagnosis and treatment, but for the disposal of tuberculous patients within its borders. I thought that we had sent out such bulletins often enough and I felt sure that the majority of physicians, and that certainly all boards of health knew how to get a patient into a state sanatorium, or at least knew how to get a patient into a local institution, or that they certainly knew where to apply for such information. I have come to realize, however, from my experience in the past year that I was mistaken, and that nothing along this line must be taken for granted. This is one point, and not a minor one, which may be called a war tuberculosis problem that awaits solution in Massachusetts.

In the figures which I have already given I noted with interest and, I must say, with disappointment the large number of men rejected under the draft classified as a result of my own investigations as "unknown," "disappeared," "left the state," or "removed." Here is another war tuberculosis problem. It ought not to be as simple as it apparently is, for a man who has been classified as tuberculous, or a tuberculosis suspect, so utterly to disappear that no trace of him, from the health point of view, is left behind. This, I feel, is a very definite problem. I believe the time is coming when each local board of health must make a yearly survey of the community of which it is in charge and give an adequate and satisfactory accounting of the present condition and the disposal of the cases of tuberculosis in its

midst. Such a regulation, with a proper penalty clause attached, would, I feel sure, have a very salutary effect, particularly on certain communities who pride themselves on being so healthy that they have no tuberculosis.

There is one problem, however, which the war has brought out which I feel must be met by every state and which affects every one of us. This problem is to find out how many of these men rejected in the draft, and discharged from the Army on account of tuberculosis, who at the present time are definitely stamped as having tuberculosis, or, which is perhaps worse, as suspected of having tuberculosis, really have that disease in the clinical sense. This I feel is a really important problem.

Two or three weeks ago I was asked to see a man in the Out-Patient Department of the Massachusetts General Hospital. He was 45 years old, a boiler maker, weighing nearly 200 pounds and looked the picture of health. He had a wife and five children and lived in a nearby city. He was taken with influenza while in service in the Navy in Ireland last October. During this time he had several copious hemorrhages. As soon as transportation could be arranged he was sent to the Navy tuberculosis sanatorium at Las Animas, Colorado; from there he had recently been sent back to his home in Massachusetts, and directed to apply to the Vocational Training Board in Boston for further help. He was examined by this board and was declared still to have active tuberculosis, and was told to go back to Colorado. It was at this stage that he saw me. According to the x-ray examination taken at the Massachusetts General Hospital there was no evidence of tuberculosis in the man's lungs: his temperature and pulse, taken for a week at home, were normal; sputum examinations were, and had been always, repeatedly negative, and I personally could find nothing wrong with his lungs at any examination. I advised him to go back to work, and to keep under observation once a month, which he has done. There are many such cases as this in Massachusetts. I fully realize that the standards of diagnosis for tuberculosis, as far as the Army is concerned, must be and should be stricter perhaps than those we employ in civil life. A man may be discharged from the Army on a diagnosis based on the x-ray examination alone, and a man may be discharged for a slight hemorrhage which may or may not be due to tuberculosis.

The Army could and should afford to take no chances.

I do feel, however, that the real tuberculosis problem which we have in the State of Massachusetts is not merely the looking up of those cases who have been classified as having disappeared or removed or unknown; it is not merely seeing that in the future every local board of health, and every physician, and every agent in the State dealing with tuberculosis, has accurate, up-to-date knowledge of the facilities at his disposal, but that our real problem which the war has given us is to find out how many of these men discharged from the Army, or rejected in the draft, on account of tuberculosis, really have that disease, and of more importance still, to formulate our standards so that there will be in the future a clear and definite understanding as to what constitutes active, pulmonary tuberculosis from the state and board of health point of view.

In a recent letter to a member of this Society, General Edwards, commanding officer of the 26th Massachusetts Division, in a reply to a question as to how much of a tuberculosis problem he had with his men in France, replied definitely that he had no tuberculosis problem. The Red Cross has assured me that they have had no tuberculosis problem. From the point of view of a state health officer dealing with tuberculosis, I can state that Massachusetts has no tuberculosis problem, as far as handling and disposing of the individual case is concerned. I do feel, however, that the war has emphasized and called to our attention the problem which we already had with us, as to how best to come to some practical and sane conclusions and to formulate definite standards in regard to tuberculosis, its diagnosis, and treatment. This it seems to me is the real Massachusetts war tuberculosis problem.

THE PHYSIOLOGIC BASIS OF THE COMMON GASTROINTESTINAL SYNDROMES FOUND IN PULMONARY TUBERCULOSIS.*

By FRANCIS MARION POTTENGER, A.M., M.D., LL.D.,
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IN discussing the relationship between inflammation of the lungs and altered function in the gastrointestinal tract, it is necessary to re-

* Read before the American Gastro-Enterological Association, June, 1919.

call the embryology of these structures; for this gives us a basis for understanding the manner in which they are related through the visceral nerves.

The respiratory system is formed from a diverticulum from the gastrointestinal canal, and therefore carries with it the innervation of the mother structure, the same as the liver, pancreas and body of the bladder, which likewise have the same origin.

This embryological origin gives to the lung the same double innervation as that possessed by the intestinal tract. All smooth musculature and all secreting glands belonging to the lungs and bronchi are activated the same as the stomach and intestines (except the sphincters) by the vagus nerve, which belongs to the parasympathetic division of the vegetative system; likewise all, except the sphincters, are inhibited by the sympathetics.

When the pulmonary structures are inflamed, sensory nerves belonging to both of these systems are irritated and result in reflex action. During the stage of toxemia the cells of the entire nervous system also are irritated by the toxins. Toxins express themselves, peripherally, largely through the sympathetic nerves and in this manner produce a general inhibition of action throughout the gastrointestinal tract, decreasing the secretion, and relaxing the muscle of the walls. It may be that there is also an action of the toxins directly upon the muscle cells which interferes with their normal rhythm. The common symptoms on the part of the gastrointestinal tract during toxemia are those of decreased motility and decreased secretion—hypomotility, hypochlorhydria and constipation due to lessened secretion and lessened peristaltic action. This is common in all acute infections accompanied by marked toxemia.

The sensory sympathetics supplying the lung mediate with the spinal nerves in the cervical segments of the cord and produce reflex spasms of the muscles supplied by the motor nerves, and reflex pain in the tissues supplied by the sensory nerves, and, if the process becomes chronic, trophic changes in the skin, subcutaneous tissue and muscles supplied by both motor and sensory nerves.

The sensory fibers of the pulmonary vagus (parasympathetics) mediate with other fibers of the vagus and with other parasympathetic nerves (7th and 9th cranial nerves) and with the 5th cranial nerve which stands in the same

relationship to the sensory fibers of the vagus as the spinal nerves do to the sympathetics.

It is through the vagus (parasympathetics) then that the reflexes take place which affect the gastrointestinal canal when the lung and bronchi are inflamed. This parasympathetic stimulation is the cause of all the common reflex functional disturbances in the gastrointestinal canal which result from pulmonary inflammation.

Before one can understand the reflex symptoms which arise from inflammation in any organ, he must first appreciate the fact that nerve cells in different individuals and in the same individual at different times show different degrees of irritability; and second, that a nerve cell will not discharge and produce action until the stimulus is *adequate*. In other words, nerve cells are able to withstand a certain amount of stimulation without producing action, and this amount varies in different individuals and in the same individual under different circumstances. This accounts for the variability of symptoms as noted in a given disease, a fact which has always made diagnosis difficult. The diagnostician must remember when studying symptoms, that a given stimulus *has a tendency* to produce such and such an action, but that this action may not occur because the stimulus may not be *adequate* to discharge the nerve cells upon which the action depends. A given stimulus might be able to produce syndromes in several systems of the body, or several syndromes in one system; yet one or more of these might fail to be present.

When the lung is inflamed the sensory fibers of the pulmonary branches of the vagus are irritated, and stimuli are carried to the sensory nucleus of the vagus in the medulla whence they are transferred to other neurons with which they mediate, viz., vegetative fibers of the 7th, 9th, and 10th cranial nerves and somatic fibers of the 5th cranial nerve.

When mediation takes place with the 5th, 7th, and 9th cranial nerves, reflex action results mainly in an increased secretion and an increased irritability of the nasal and oral cavities, the pharynx, salivary, and lachrymal glands; in vasomotor disturbance in the cheeks and tongue; in trophic change in the tongue, which at times causes it, when protruded, to turn toward the affected side; and in pain expressed in the sensory neurons of the 5th cranial nerve (headache).

When mediation takes place in other portions of the vagus nerve, reflex action may result in any tissue which this nerve supplies, such as the larynx and pharynx, the bronchi, heart, upper portion of the gastrointestinal canal, liver and gall ducts, and pancreas.

Reflex stimulation, if *adequate*, produces the action which normally belongs to vagus stimulation in these structures,—an increased tonus in the muscles and an increased glandular secretion.

It is now evident that if stimuli which course centralward over the sensory neurons of the pulmonary vagus are transmitted to the efferent motor neurons of the vagus which supply the gastrointestinal canal, that they will have a *tendency*, reflexly, to cause an increased tonus in the musculature and an increased secretion in the glands. This is what we find clinically when the pulmonary tissue is inflamed in such chronic diseases as pulmonary tuberculosis. The "so-called" functional disturbances on the part of the gastrointestinal canal, which are so common in pulmonary tuberculosis, are nearly all of this type.

Variability characterizes functional disturbances. These symptoms may be present at one time and not at another. Unless one is familiar with this characteristic he cannot fully appreciate the gastrointestinal symptoms in pulmonary tuberculosis.

The common syndromes on the part of the gastrointestinal tract which are indicative of a preponderating vagus stimulation and which often result from reflex stimuli arising in other organs which are the seat of inflammation are nausea, vomiting, hyperchlorhydria, gastric hypermotility, colicky pains, spastic conditions in the intestines, notably spastic constipation, colitis, diarrhea, and intestinal stasis.

This group of functional disturbances makes up a considerable proportion of the symptoms on the part of the gastrointestinal tract of which patients suffering from early active or chronic semi-quiescent tuberculosis complain, and sends the patient to the gastroenterologist as often, if not more often, than to the specialist in disease of the chest. In fact, the reflex symptoms which are caused by clinical tuberculosis before the advent of marked toxemia, and productive cough, and during the stage of semi-quiescence are practically all expressed reflexly through the vagus in systems other than

the lower respiratory; in the larynx as irritation and cough; in the heart as an inhibiting effect producing instability; and in the gastrointestinal canal in the form of the syndromes above mentioned.

These symptoms may be caused by conditions in which the vagus nerve cells are hyperirritable (vagotonia); by conditions which produce a marked stimulation of the vagus or a decreased stimulation of the sympathetics; by direct irritation of the nerve cells lying in the walls of the stomach and intestine; by reflex action in one part of the intestine, the stimulus coming from another part; or reflexly from inflammation in other organs. The most common sources of reflexes coming from without the intestinal walls, in my experience, are the appendix, gall bladder, lung, and eye.

It can be stated as a rule that functional disturbances on the part of the stomach and intestinal tract are more commonly an expression of reflex action from some other organ than from a disease of the tube itself; and when the syndromes here mentioned are present, the appendix, gall bladder, and lungs should be carefully examined for the presence of disease, and eye strain should be considered. One must not forget, however, that so-called nervous individuals (vagotonics) are also prone to show this same picture of functional disturbance. The expression of "nervousness" in the gastrointestinal canal is predominantly that of increased vagus stimulation. When vagotonics suffer from a pulmonary tuberculosis or a chronically inflamed appendix, or a disease of the gall bladder, then the symptoms on the part of the digestive system which result from vagus stimulation are prone to be very much exaggerated.

In order to understand what functional symptoms on the part of the digestive system are prone to manifest themselves in a patient suffering from tuberculosis, it is necessary first to know the nervous, the physical, and the psychological condition of that patient before he suffered from pulmonary tuberculosis: to know whether he previously suffered from any particular type of digestive disturbance, and to know what other complications may be present. It is also necessary to make a distinction between active pulmonary tuberculosis with marked toxemia and the type of the disease when toxemia is not prominent.

This is evident from the fact that reflex symptoms do not arise except as the stimulus

causing the reflex is sufficient to overcome the action of opposing nerves. When nerve cells are in different degrees of irritability, the strength of the stimulus necessary for their discharge will vary greatly. As long as the force of the sympathetic neurons in the intestinal tract is equal to or approaches the force of the neurons of the vagus nerve (parasympathetics) no disturbance in motility or secretion will take place, and normal function will exist; but just as soon as the force in one system overbalances the other, symptoms will arise.

When the pulmonary parenchyma is inflamed, as it is in tuberculosis, the sensory nerve endings of the pulmonary branches of the vagus nerve are irritated. This stimulus is carried to the medulla, where it is transmitted to motor neurons, which produce reflexes in structures supplied by them. Among the nerves involved are the motor fibers of the vagus which supply the stomach and intestine. This stimulus has a tendency to produce action in all the motor neurons to which it is transferred; and when it is adequate to overcome all opposing forces acting upon the sympathetics, it produces parasympathetic syndromes such as are mentioned below.

Whether a reflex gastric hypersecretion or hypermotility (increased muscle tonus), or a reflex intestinal hypersecretion or hypermotility (increased muscle tonus) will occur depends upon whether the stimulus arising in the inflamed organ and transmitted to the musculature and secreting glands of the stomach and intestine through the vagus is sufficiently strong to overcome the opposing inhibitory action of the sympathetic nerves supplying those tissues. This will depend also, to a large extent, upon the natural characteristics and tendencies of the patient. That the stimulus is adequate in a large proportion of instances is evident from the frequency with which patients afflicted with pulmonary tuberculosis suffer from reflex nausea, vomiting, hyperchlorhydria, spastic constipation, colitis, intestinal stasis, and colicky pains. These syndromes are common in patients who were free from them prior to their clinical tuberculosis and are often rendered more annoying in those instances where they were previously present. I have seen hyperchlorhydria in many instances during the high fever accompanying cavity formation. Not infrequently have I seen a relative bradycardia at the same time. These symptoms can only be inter-

preted as being a result of reflex stimulation of the vagus from inflammation in the lung, coming as they do during severe toxemia, which stimulates the sympathetics, depressing gastric secretion, and produces an accelerating influence upon the heart. Nausea and vomiting, which are often present at these times, are also frequently of reflex origin. These reflex relationships I have discussed quite fully in previous communications.^{1, 2}

A few words in explanation of the reflex nature of these syndromes may not be out of place. I do not wish to be understood as maintaining that these syndromes when present in pulmonary tuberculosis are always a reflex from the lung, for I realize that there are other causes operating; but I desire to emphasize that the inflammation in the lung produces stimuli which have a tendency to produce them. *Nausea and vomiting*, found in pulmonary tuberculosis, are undoubtedly often of reflex origin; being an expression of increased muscular tonus in the gastric walls. These patients also, at times, show more than ordinary degrees of hunger. Carlson has shown that this phenomenon is due to increased gastric motility.

Colicky pains are very common during the course of pulmonary tuberculosis. Unless there be a mechanical obstruction these are usually due to areas of spasticity in the intestine which interfere with the onward movement of the gas, causing it to accumulate, and distend the gut and cause the pain. When the intestinal musculature is in a state of increased tonus, different areas of the gut show different degrees of irritability, a condition which favors constriction at intervals and permits of the accumulation of gas with distention of the bowel proximal to the constriction.

Spastic constipation often results from reflexly increased tonus in the musculature of the colon, the stimulus causing the reflex emanating from the lung. This form of constipation is usually accompanied by colicky pains. It is due to the same cause, being an expression of the same increased muscle tonus (hypermotility).

Colitis in tuberculosis has the same reflex cause as the foregoing phenomena. The vagus, when stimulated, not only causes an increased muscle tonus leading to a hypermotility, but also an increased secretion in the intestinal glands.

The reflex type of *intestinal stasis* is caused by a retardation of the intestinal contents in

their progress through the canal as a result of spastic conditions in the bowel.

If we substitute inflammation in the appendix and the sensory fibers of the vagus which supply the appendix in one case, and inflammation of the gall bladder and the sensory fibers of the vagus which supply it in the other, for the inflammation of the pulmonary tissue and the sensory fibers of the vagus which supply it, we have the mechanism which explains the gastrointestinal symptoms in appendicitis and inflammation of the gall bladder. Then, further, if we will substitute the stimuli which arise from eye strain, and the sensory fibers of the 5th cranial nerve which mediate with the motor neurons of the vagus, for the stimuli arising from inflamed pulmonary tissue and the sensory fibers of the pulmonary vagus, we will have an explanation of the reflex mechanism through which eye strain produces symptoms on the part of the gastrointestinal canal.

Through an understanding of visceral nerves and the relationships which are maintained by the various viscera through them, reflex functional disturbances are stripped of their former mystery and placed on an understandable basis.

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LOSS OF SIGHT FROM RETROBULBAR NEURITIS DUE TO POSTERIOR ACCESSORY SINUS DISEASE, WITH REPORT OF 17 CASES.*

By LEON E. WHITE, M.D., BOSTON.

(Concluded from page 491.)

CASE 11. R. M., aged 45, was referred on April 18, 1918, by Dr. William J. Daly, with diagnosis of axial neuritis left with large central scotoma for colors. History of fair health and ability to work. Patient has had pain across the forehead and through the eyes for past 3 weeks. Expecterated a little bloody mucus in the morning. Eight months ago the sight of the left eye commenced to fail and he visited the Infirmary. His fundus was examined at that time by Dr. Worthen and reported as practically normal; vision 20/200. The fields were slightly contracted; no color scotoma. With the onset of pain in the vision in the left

eye has been much worse, everything now being blurry. In the region of the left posterior ethmoid there was considerable soft polypoid tissue, bleeding freely at touch. A most interesting phenomenon was noted: after thoroughly cocaineizing this region the slightest pressure with a cotton swab caused intense pain. Again this region was cocaineized, yet the pain was in no wise lessened. This led me to suspect some more serious trouble than merely an infection in these cells, so I sent the patient to the Infirmary for further examination. The x-ray by Dr. Liebman showed marked erosion in the sella turcica region; clinoid processes obliterated; ethmoids and sphenoids moderately obscured. This finding, of course, meant a malignant growth, so nothing was attempted in an operative way. The Wassermann and neurological examinations were both negative. After being under observation 6 days he was discharged unrelieved. One week later the patient died rather suddenly and his family physician, Dr. G. W. Blaisdell of Manchester, Mass., wrote as follows:

"I saw Mr. M— on May 3d, at 2 P.M. He had had headache for the previous twenty-four hours. The headache was general all over the head. Temperature and pulse at that time normal. He was rational and answered all my questions. There was a slight protrusion of the left eyeball. The eye was painful to touch. All reflexes were normal. I saw him again at seven o'clock. He was not as bright mentally. The left pupil failed to react to light. I saw him the next morning at five o'clock. He was then passing into coma. The reflexes of his legs even then were about normal. He died suddenly about two hours from that time, dying very easily without a struggle."

Dr. P. E. Meltzer of the Infirmary kindly made the autopsy for me. His report is as follows:

"The usual technic was observed and calvarium was removed. Hemorrhagic areas were noted in the parietal region of the cerebral hemispheres suggesting meningitis. No free pus or exudate was seen but the sulci were infiltrated. On elevating the frontal pole, the most striking condition was noticed. Projecting upward from the sella turcica was a tumor about the size of an English walnut, which, as it projected upward, made quite an impression on the under surface of the brain just anterior to

*Read before the American Laryngological, Rhinological and Otolaryngological Society at New York City, on June 6, 1919.

the chiasm. It was slightly adherent to the surface of the brain, but by careful manipulation it apparently separated intact and appeared pedunculated from the body of the sphenoid, in the pituitary region. The cranial nerves, particularly the optic, were removed for sections. In order to remove the tumor, it was necessary to remove practically the anterior and middle fossae of the base of the skull. This was done but the cellular condition of the nasal walls made this difficult. By carefully chiseling through the cribriform plate, the roof of the orbits, the lesser and greater wings of sphenoid and posteriorly through the basilar process, a wedge shaped portion of base of skull was removed, without disturbing materially the relations. The tumor and neighboring structures, posterior ethmoidal cells, were practically intact. The brain and specimen were placed in 10% formalin for purposes of hardening. Dissection later proved that the body of the sphenoid was practically entirely eroded."

Dr. Verhoeff, who examined the brain and new growth, reported as follows:

"Pathological diagnosis: Large round cell sarcoma of sphenoid bone and hypophysis. Streptococcus meningitis.

"The specimens consist of the brain and the body of the sphenoid bone together with the posterior portions of the ethmoids, including the optic canals.

"The sphenoid bone is almost completely pervaded by a tumor growth which has either completely broken down or rendered the bony structure friable. The sphenoid sinus is filled by the growth, which has also broken through into the pharynx over a small area. The growth has extended into and greatly enlarged the pituitary body, but the capsule of the latter is still intact towards the brain. The chiasm is pressed upon by the enlarged pituitary body but has not been invaded by the growth. The brain shows the typical picture of a diffuse purulent lepto-meningitis.

"Histological examination: The meninges show diffuse purulent infiltration containing an abundance of streptococci. Sections of a portion of the growth removed from the sphenoid sinus show it to be a large round cell sarcoma. The fixation is not sufficiently good to permit special stains being used.

"Sections of the pituitary body show that it has been almost completely destroyed by the

growth, only a few parenchyma cells remaining here and there.

"Sections of the optic nerves and tracts, prepared by the Merch and Weigert methods, show no evidences of atrophy or degeneration."

"As I remember the case, there was a central scotoma in one or both eyes. This is not inconsistent with the fact that I found no degeneration in the optic nerves, because there may have been simply functional blocking, capable of recovery could the pressure have been removed."

CASE 12. Mr. C. T. K., aged 49, referred by Dr. F. E. Cheney on July 18, 1918, with diagnosis of unilateral retrobulbar neuritis of some months' standing. He has had considerable secretion in nose and throat for years. Four months ago, following an unusually severe cold, the vision in the left eye suddenly became very poor and there was severe pain through the head. Then something seemed to break in the back of his nose and for a few days there was an offensive bloody discharge, followed by complete relief from the pain. His vision, however, never completely returned. Dr. Cheney's report is as follows:

"An ophthalmoscopic examination showed a marked swelling of the left disc, about 3.D.—the borders completely obliterated, retinal veins moderately full and tortuous, and obscured at disc borders. There were a number of glistening cholesteric-like spots on the disc and the appearance of the disc as a whole did not suggest a recent inflammatory process. The borders of the right disc were completely obliterated and the disc elevation was about 1.D. The fields of vision were not contracted.
v.o.d.c.+50 cyl.ax 0—l.v.o.s.c.+50—50 cyl.ax.0—0.7

"As I have said, the appearance of the left disc especially suggested an old rather than a very recent inflammation and the trouble probably existed before his cold and nasal discharge in March."

The Wassermann was negative, as was also the neurological examination by Dr. W. E. Paul. Patient does not use alcohol or tobacco to excess. A posterior deviation of the septum crowded the left middle turbinate so as to obstruct the sphenoids and posterior ethmoids. The tissues in this region were distinctly boggy and mucopurulent secretion was seen about the middle

turbinate. The x-ray plates made by Dr. Liebman showed "Ethmoids: left anterior and posterior obscured. Antrum: right obscured. Sphenoidal sinuses: both rather hazy." On July 22, 1918, about 4 months after the onset of the neuritis, I removed the left middle turbinate and opened a posterior ethmoid cell, anterior to the sphenoid, which at first was thought to be a rather small, shallow sphenoid, but on further examination an opening leading into a good sized sphenoid was found. The sphenoid contained pus, was some 10 m.m. in antero-posterior diameter with a thick anterior wall and soft tissue on the floor. There has been a gradual improvement in the vision. The blurriness no longer exists. Three months after the operation Dr. Cheney found that vision in right eye was still normal and an improvement of 1/10 in the left, but there was no appreciable change in appearance of discs and he thinks there may not be for a considerable time. Five months after the first operation the opening into the sphenoid, which had become quite small, was enlarged. This case is still under treatment as the fundi are not yet normal.

CASE 13. Miss E.A.H., 49, was referred by Dr. Thompson at the Infirmary on December 16, 1918, with diagnosis of bilateral optic neuritis. History: Four months ago, vision, which had always been poor, due to extreme myopia, began to be much worse. Has had severe pain in head for past fifteen years, but much worse the last six months and constant for the past four weeks, causing complete disability. Has sensation of severe pressure within the head. Six months ago commenced to expectorate a thick mucus streaked with pus, and since that time has had intervals of marked temporary loss of vision. Pupils small and dilate easily; both discs irregular in outline and white on temporal sides, probably due to extreme physiological cupping of both nerve heads. Nasal side of discs slightly accentuated. There was a marked deflection of the septum and hypertrophied middle turbinates. Physical, dental, neurological, x-ray, and Wassermann examinations all negative. Vision 20/200 both. On January 3, 1919, the septum was resected, the right middle turbinate removed and the right sphenoid opened. It was very large and filled with a thick gelatinous secretion. For several weeks the patient was entirely free from headaches and there was a

slight improvement in vision, i.e., from 20/200 to 20/100, and enlargement of the visual fields. Then she complained of a feeling of discomfort with some pain on the left side, apparently above and behind the eye and extending to back of neck. On January 31st her left middle turbinate was removed as well as the anterior wall of the left sphenoid. Reddened areas were found in the sphenoid but only a small amount of mucus. This case is still under treatment.

CASE 14. A. R., aged 5, was referred by Dr. Spalding at the Infirmary on January 3, 1919, with diagnosis of bilateral neuro-retinitis. Child had influenza four weeks ago, and for the past two weeks has acted as if he could not see; complained of headache and had some vomiting. The fundi showed optic neuritis with stellate exudate changes in the macular region and dilated veins. Patient apparently does not even perceive light. Neurological, physical, x-ray, and Wassermann examinations all negative. There was a slight deviation of the septum high up, and both middle turbinates were greatly swollen, blocking the posterior ethmoids. For a week the turbinates were cocaineized and the nose irrigated with a hot saline solution, as I hesitated to operate on such a young child. As there was no sign of a return of the vision both middle turbinates were removed and the posterior ethmoids cleaned out,—a difficult procedure I assure you, in such a small nose. The following notes from the Infirmary record show the progress of the case from day to day:

January 12. (Two days after the operation). Lumbar puncture negative. Fundi show no change except possibly a more grayish tint to disc.

January 13th. Patient beginning to note shadows in front of him. Says he sees the light.

January 15th. Some improvement in vision.

January 17. Patient walks about the room, avoiding large objects. Recognizes a watch. Nerve heads appear slightly less blurred.

January 20th. Vision improved; counts fingers at 4 feet.

January 27th. Less edema of retina. Still some swelling of optic nerve and white exudate in macula region but definitely less marked. Counts fingers at 20 feet.

February 13th. Improvement in fundi. Less edema of nerve head. Exudate in macula region definitely less.

February 15th. Vessels of fundi of normal size.

February 18th. Discharged. Disc outline not distinctly made out. Some pallor of discs. White patches in macula region much smaller. Counts fingers at 20 feet and picks up pins from floor. Vision apparently normal.

CASE 15. J. K., 37, was referred to me from the Eye Clinic of the Infirmary on February 6, 1919, with diagnosis of bilateral papillitis. History: A month previously, while at work, his right eye was struck with a fragment of eye-glass or the piece of steel that broke the glass. Vision for fingers at 1 foot left, 20/40 right. Dr. Quackenboss saw the patient on February 14th, 1919, and noted a marked double optic neuritis. Both discs were indistinct in outline, the left more so than the right, but no swelling made out. Physical, neurological, and Wassermann examinations negative. X-ray showed right antrum and posterior ethmoids obscured. Sella turcica unusually large in anteroposterior diameter but probably not pathological. The left middle turbinate was removed and the sphenoid and posterior ethmoid opened. The sphenoid was filled with pus under some little pressure. The patient developed an acute frontal sinusitis ten days after the operation, but the eye conditions improved somewhat. Two weeks after the operation Dr. Quackenboss noted the left disc stood out more clearly and the edges more distinct. On March 24th the discs still showed some slight hyperemia. Vision right 20/20, left fingers at 2 feet. Question of malingering as the patient was contemplating bringing suit for damages against the company he worked for when he had his glasses shattered. A secondary operation was advised, but refused.

CASE 16. S. D., 40, was referred by Dr. E. T. Easton with diagnosis of unilateral optic atrophy. History: About 3 years ago he noticed that there was a constantly present blue spot in front of the right eye and that everything was blurry. Under constitutional treatment this cleared up in about three weeks and for a year the vision was normal. Then there was a recurrence of the trouble and in spite of treatment by specialists near his home and at the New York Eye and Ear Infirmary, vision has been going from bad to worse. When seen by Dr. Easton on February 12, 1918, the vision

in the right eye was 20/50; pupil rather dilated but reacted well; disc slightly pale; fundus otherwise normal; central scotoma for red, green, and blue. When next seen by Dr. Easton on February 13, 1919, vision had dropped to 20/200. Patient was referred on his first visit to Dr. Easton to the Eye and Ear Infirmary and admitted as a house case on February 19, 1918. Diagnosis: Optic atrophy right. The x-ray of sinuses, Wassermann, and neurological examinations all negative. Patient was first seen by me on February 20, 1919, i.e., one year later. There was a marked deviation of the septum to the right and the middle turbinate was tightly wedged between it and the outer wall. Eight days later I removed his right middle turbinate, opened the sphenoid and posterior ethmoid. The mucous membrane lining these cavities was considerably thickened, quite evidently a case of hyperplasia. Two months after the operation Dr. Easton reported as follows: "Mr. D. shows improvement in vision in right eye from 20/200 to 20/100. The disc shows no increase in pallor."

CASE 17. Mrs. R. D., aged 31, was referred by Dr. Henry Hawkins on March 21, 1919, with diagnosis of bilateral retrobulbar neuritis; vision right 20/30, left 20/100; papillitis of each disc, general edema of retina. History: Frequent colds during past winter but vision not affected until six days ago when everything seemed foggy. This foginess has been getting worse and she complained of a blind spot in the center of her visual field. She has had considerable pain about the eye and back of neck extending down to the shoulder blades. Both middle turbinates were greatly hypertrophied, the left the most marked and especially obstructing the sphenoid. Immediate operation was advised. On the following morning the left middle turbinate was removed and the sphenoid and posterior ethmoid opened. The sphenoid was of enormous size, extending over an inch beyond the median line to the other side. The lining was boggy and the posterior ethmoid cell large and high. The sphenoid was irrigated daily with a hot saline solution. The discomfort about the eye and the pain in the head was immediately relieved. Vision returned rapidly so that on April 10th, 3 weeks after the operation, Dr. Hawkins reported: "Right eye with proper correction

20/20, left 20/30; fundi little change from normal conditions."

Two weeks later vision 20/20 both.

This last case illustrates how quickly results are obtained by prompt operative interference, and I believe is the method of procedure to be followed in all obscure cases. Is it not infinitely better to open the posterior accessory sinuses promptly, sometimes perhaps unnecessarily, than to allow one of these cases to become permanently blind through neglect?

SUMMARY.

Of the 17 cases here reported, 2 were not operated upon (Cases 1 and 11). In one the eye remained permanently blind, while in the other the patient died from a sarcoma.

Of the 15 operative cases, all but one improved (Case 10). In this case the eye had been practically blind some months and the operation was undertaken to determine what effect, if any, the opening of the sphenoid would have on the dilated veins of the fundus.

Normal vision was obtained in seven (Cases 2, 3, 5, 7, 8, 9, 17).

There was marked improvement in three (Cases 6, 12, 14), but some optic atrophy.

Only slight improvement in four (Cases 4, 13, 15, 16), this being due to the chronic nature of the disease and the delay in operating. In all these an early operation would have saved much more of the vision.

The toxemia from the pns, found in 7 cases, seemed the chief factor (Cases 1, 4, 9, 10, 13, 15).

In 8, hyperplasia appeared the predominating lesion (Cases 2, 3, 5, 6, 7, 8, 16, 17).

In two cases pressure apparently played the leading rôle (11, 14).

In seven, the nasal examination was negative (Cases 2, 4, 5, 7, 8, 9, 10).

In six cases the x-ray findings were positive (Cases 2, 3, 4, 11, 12, 15). Negative findings, however, by no means contra-indicate an operation.

The middle turbinate was removed in all the operated cases and the sphenoid opened in all but one (Case 3). The posterior ethmoid cell is at present opened as a matter of routine. Unless suspected of infection, the other ethmoid cells are not disturbed. The complete exenteration does not, in most cases, seem necessary. The Sluder technic of removing the middle tur-

binat and opening the sphenoid is followed. In practically all cases Wassermann and neurological examinations were made and the teeth investigated.

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Clinical Department.

NECROSIS OF THE INDEX FINGER FROM LYSOL: REPORT OF A CASE.

AN ARGUMENT FOR THE THOROUGH MIXING OF SUCH SOLUTIONS.

By HORACE K. SOWLES, M.D., BOSTON

CARBOLIC acid necrosis is a well recognized possibility, but the danger from concentrated solutions of lysol, although evident, is probably not quite as prominent in our minds. The manufacturers of lysol definitely state on their label that a 1% to 2% solution should be used, but I feel that many people do not bother to follow these directions or possibly fail to mix the concentrated lysol with the water, as in the following case which I wish to report.

H. J., male, 29, came to me on June 28 because of the condition of his right index finger. The patient states that about four days ago he noticed some soreness and redness at the base of the nail on the right index finger. During the next forty-eight hours he soaked the finger in lysol solution four times; average length of soak was perhaps fifteen or twenty minutes. Yesterday he noticed that the whole distal half of the finger seemed to be covered by a blister and the whole finger was very much swollen. The condition is worse today but not very painful.

On examination the finger shows marked swelling with redness about the base, which had a very sharp line of demarcation. The epidermis of the dorsal distal half of the finger is white and raised from the subcutaneous tissue. It looked as if it had been floated up by serum or pus, but on removing it the subcutaneous tissue was dry and necrotic. In fact, it had a typical "carbolic acid gangrene" in appearance.

The finger was cleansed with alcohol and a boracic ointment dressing applied. In the course of time there was a fairly extensive slough from the dorsum of the finger which involved the terminal joint. Now, at the end of five weeks, there is a small granulating area at the base of

the nail and very slight motion of the terminal phalanx. Undoubtedly the action of the terminal joint will be permanently impaired.

After careful questioning as to the method of soaking it was learned that the patient had taken a basin of water and poured in an indefinite amount of lysol. Then the hand was placed in the solution, palm upward, and soaked for fifteen or twenty minutes, the dorsum of the index finger apparently lying in the concentrated lysol which had settled to the bottom of the basin and had not been mixed with the water.

Book Reviews.

Pulmonary Tuberculosis. By A. L. FISHBERG, M.D. New York: Lea & Febiger. 1919.

The reviewer notes with interest and with encouragement that a new edition of Dr. Fishberg's book has become necessary so soon after the first. It contains much new material that is of great interest and value, and although its weight,—something over four pounds,—makes it difficult to hold, the excellence of the paper, clearness of the type, and the good arrangement in general, more than make up for its bulkiness.

Dr. Fishberg is radical in many of his frankly expressed views and opinions, but even if one cannot agree with many of them, it is stimulating and interesting to find a writer who comes out so definitely and clearly. In his introduction, for instance, he wisely calls attention to the fact that incipient does not mean curable tuberculosis and that advanced does not necessarily indicate a hopeless outlook. In a study of over 1,000 patients in Massachusetts sanatoria, the reviewer found to his surprise that there was a larger proportion of patients admitted in the moderately advanced stages of the disease who were doing well four or five years after their discharge than of those in the incipient stage. Dr. Fishberg makes the statement that if all tuberculous persons would consent to hospitalization, available institutions would hardly accommodate 10%. If he means, and he doubtless does mean, all tuberculous persons in need of hospital or sanatorium treatment, the reviewer would doubt the truth of his statement, in Massachusetts at least. Indeed, when our county institutions, now in process of construction, are finally opened, along with certain private and municipal hospitals and sanatoria, whose completion has been delayed by the war, Massachusetts will run a risk of having more beds for the tuberculous than can be filled. He states that careful home treatment is productive of practically the same immediate and ultimate results as institutional treatment and is less costly to the patient and

to the community. Again the reviewer would strongly object to this statement and is firm in his belief that the great majority of workers in the field of tuberculosis in this country and in Europe would agree with him, that sanatorium treatment, in the broad sense of the term, is the best method at our disposal of treating the average consumptive. His statement that home treatment is less costly to the patient than institutional treatment is another one which will not bear analysis. In Massachusetts State and County Institutions the cost per week is four dollars to those who can pay it, grading down to nothing for indigent cases; while at municipal hospitals there is rarely any charge.

The reviewer rather feels that Dr. Fishberg tends to belittle the dangers of bovine sources of infection and over emphasizes the possibility that such bovine infection may give a certain amount of immunity against infection from human sources.

His chapters on the signs and symptoms of tuberculosis are excellent, and his emphasis of the importance of constitutional signs and symptoms is of great value. Every general practitioner might well remember the following: "If there are no symptoms of constitutional toxemia, the patient may have been infected with tubercle bacilli, but he is not sick with a disease which needs special treatment, costly to the community and often ruinous to the patient or the family."

The reviewer has a constitutional objection to the word phthisis which is used in this volume to denote tuberculous disease in distinction from tuberculous infection. The two phrases, tuberculous infection and tuberculous disease present the same meaning and serve the same purpose in a rather better way than does the ugly sounding word phthisis.

The comparatively little danger that a normal, healthy adult runs from even intimate exposure to a consumptive is justly pointed out as well as the rarity of marital tuberculosis.

In his chapter on cough, the reviewer believes that he pays undue attention to the different varieties that exist and that the space devoted to this might well be condensed into one sentence: that there is no cough characteristic of tuberculosis and that all kinds of cough may exist. He advises that rectal temperature be used in place of temperature by mouth. There are many who do not believe that this is necessary or wise. He states that there is no active tuberculosis without fever. There are many observers including the reviewer, who believe that the combination of a rapid pulse and a sub-normal temperature constitutes a danger signal that cannot be disregarded. He repeatedly speaks of "hectic" fever. The majority of his readers will probably agree with the reviewer that "hectic" fever as well as "hectic flushes" are things of the past.

His chapter on hemoptysis, its pathology, causes and treatment, is excellent. It is rather a pity that he does not state definitely the amount of blood necessary to constitute a hemorrhage. An attempt has been made to do this in the "Diagnostic Standards," formulated for the purpose of the Framingham Tuberculosis Demonstration, in which the statement is made that "a hemorrhage amounting to at least a teaspoonful of clear blood is strongly suggestive of tuberculosis, but that any amount of expectorated blood should be investigated." He wisely emphasizes the fact that a hemorrhage, no matter how copious, rarely has any immediate serious consequences. He quotes the figures of Richard Cabot, who found that 34% of 3444 cases of so-called hemorrhage were due to heart disease. The reviewer believes that had Dr. Cabot had any such standard as the one mentioned above for the Framingham experiment, his proportion of cases due to heart disease would have been much lower and those due to tuberculosis much higher. Considerable space is devoted to hemoptysis of "nervous" origin and of "unknown" origin. Neither of these paragraphs adds much to the value of his book.

In physical examination a number of pages and ten cuts are devoted to Krönig's Isthmus. The reviewer is bold enough to recommend that in future editions reference to this isthmus be left out altogether, as, in his opinion, a vast amount of time has been wasted and a vast number of wrong deductions made by endeavoring to percuss out this area described by Krönig. One note with distinct approval, however, that no mention is made of "consonating râles." For many years the reviewer has endeavored to find out exactly what a consonating râle is, without success. He wisely emphasizes the importance of the use of the whispered voice. His chapter on radiography is sane and sound; likewise, his conclusion, that the complement fixation test is not, as yet, of great value, is to be commended.

He sums up the subject of tuberculosis in infancy, in the advice to "think of tuberculosis in every case in which no other diagnosis can be made." He considers the subject of bronchial gland tuberculosis in children in detail, and emphasizes the difficulty in the percussion of such glands. There is rather too much emphasis put upon the value of d'Espine's sign as denoting enlarged tuberculous glands rather than simply glands enlarged from any infection, acute or chronic.

His conclusion in regard to pneumothorax, that it is of value in only a very small proportion of cases, and likewise, that pulmonary syphilis is extremely rare, is in hearty accord with that of the reviewer.

There are many who would not agree with his conclusions as to the value of climatic treatment. His statement that "It can be stated without fear of meeting proofs to the contrary,

that on the whole, sanatoria do not show better lasting results than properly conducted home treatment," is one which, as mentioned earlier in this review, will not be accepted by the majority of tuberculosis workers. Statistics in regard to the value of home treatment are extremely difficult if not impossible to obtain, and the fact that so many patients relapse after a stay of a few months at a sanatorium, does not militate necessarily against the value of sanatorium treatment, but is, on the other hand, striking evidence of the fault of our whole system of handling tuberculosis which allows such relapses to take place. In the future, and indeed in some states in the present, sanatorium treatment will mean not only careful supervision in the institution, but also for months after the patient has left the sanatorium. Whether this supervision is at home or in a farm or industrial colony, is a comparatively minor detail.

His chapter on the diet is excellent, but in his chapter on drugs, one notes with considerable surprise that reference is made to the value and use of creosote and guaiacol by mouth and by inhalation, both of which nauseous combinations the reviewer imagined had been long since discarded, as certainly in Massachusetts they have been.

The book, despite these points with which the reviewer is not in accord, is stimulating and interesting and one that should prove of value to many.

War Surgery of the Face. A Treatise on Plastic Restoration after Facial Injury. By JOHN B. ROBERTS, A.M., M.D., F.A.C.S., Professor of Surgery in the University of Pennsylvania Graduate School of Medicine; Lecturer in the Civilian School of Plastic and Oral Surgery Established in Philadelphia by the Surgeon General U. S. A. Prepared at the Suggestion of the Subsection on Plastic and Oral Surgery Connected with the Office of the Surgeon-General. Illustrated with 256 Figures. New York: William Wood and Company. 1919.

Dr. Roberts' most excellent book of 200 pages is extremely interesting and most instructive.

"The possibility of correcting a hideous distortion of features or replacing a large section of the human face was realized inadequately until the great European War produced so many mutilations. The public at large and even a considerable number of members of the medical profession were unfamiliar with the advances made in plastic surgery. Military surgeons were soon confronted with problems with which they were unfamiliar; but they quickly used with ever-increasing skill the reparative methods of Tagliacozzi, Szymanowski,

Nélaton, Wolfe, Lexer, Morestin, Esser, and other workers.

"The experiences of surgeons and oral surgeons in army and navy services of the divers nations at war have given rise to a valuable literature of both prosthetic and operative treatment of facial wounds. The author has endeavored to correlate the results of military and civil practice in traumatic surgery of the face, realizing that the fundamental principles of surgical science hold sway in both provinces."

It is fair to say that Dr. Roberts has succeeded entirely and completely in the object for which his book was planned. He deserves the thanks of the profession; and his book should be studied by every surgeon who has the least interest in plastic operations.

Papers on Psychoanalysis. By ERNEST JONES, M.D., M.R.C.P. Revised and Enlarged Edition. New York: William Wood & Co. 1919. PP. VIII+715.

This second edition of collected papers of Dr. Jones is a very welcome contribution to the growing importance of psychoanalysis, since the first edition of the book has been out of print for three years. The volume has been thoroughly revised and extended and twenty-one new chapters have been added. It is written with the usual dignity, scholarship, and clearness of all Dr. Jones' contributions and it ought to do much to neutralize some of the ignorant muckraking and arm-chair criticism, which seems to be the chief indoor sport of some physicians in their attitude towards the psychoanalytic movement.

The volume is divided into several parts, *i.e.*, general papers, papers on dream analysis, papers on psychoanalytic treatment, papers on the clinical aspects of psychoanalysis, and finally papers on education and child study. It seems a pity that Dr. Jones did not include his interesting psychoanalytic study of Hamlet in this volume.

While the book is a bulky one and the papers were written at different periods of time and on different occasions, yet there is a remarkable unity in the collection. For the beginner in psychoanalysis as well as for the more advanced student who is interested in the fine details of its medical and cultural aspects, the volume can be highly recommended.

The chapter on the attitude of the physician toward the current conflicts and difficulties in the patient's life is one that ought to be read by all physicians, since so many of the medical profession are called upon to advise their patients concerning neurotic difficulties which seem to arise out of the disappointments, sorrows, problems and anxieties of their every-day lives.

THE BOSTON Medical and Surgical Journal

Established in 1828

An independently owned Journal of Medicine and Surgery published weekly under the direction of the Editors and an Advisory Committee, by the Boston Medical and Surgical Journal Society, Inc.

THURSDAY, OCTOBER 23, 1919

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SUBSCRIPTION TERMS: \$5.00 per year, in advance, postage paid for the United States, \$6.50 per year for all foreign countries belonging to the Postal Union.

An editor will be in the editorial office daily, except Sunday, from twelve to one p.m.

Papers for publication, and all other communications for the Editorial Department, should be addressed to the Editor, 126 Massachusetts Ave., Boston. Notices and other material for the editorial pages must be received not later than noon on the Saturday preceding the date of publication. Orders for reprints must be returned in writing to the printer with the galley proof of papers. The Journal will furnish free to the author, upon his written request, one hundred eight-page reprints without covers, or the equivalent in paper in the case of articles of greater length.

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ERNEST GREGORY, *Manager*

126 Massachusetts Ave., Corner Boylston St., Boston, Massachusetts.

UNDERGRADUATE RESEARCH IN MEDICAL SCHOOLS.

AN investigation has been conducted by an undergraduate society of the University of Pennsylvania to determine the conditions under which undergraduate research work is being carried on in the principal medical schools of America. The purpose and results of this inquiry have been reported in a recent issue of *Science*.

The faculty of the University of Pennsylvania believes almost without exception in the educational value of scientific research among undergraduates. The problem of making it possible for students to have time to devote to research work in addition to the regular course is a difficult one. It is interesting to discover how it has been met by the leading medical institutions.

Five main questions have been asked of twenty-five medical schools: (1) Whether undergraduates are allowed to undertake research

in conjunction with their regular work; (2) whether means are taken by the faculty to encourage undergraduate research; (3) how many of the graduating classes have undertaken some research problem under the instruction of the faculty during their regular course of study; (4) whether the curriculum permits a student to substitute time spent on research, under direction of a member of the faculty, for hours in the regular course, required or elective; and (5) whether it is believed that undergraduate research is justified by its educational value to the student.

The answers received from the various medical schools are of considerable interest, in that they show the prevailing theoretical belief in the value of undergraduate research, and at the same time disclose the difficulties which are encountered in putting it into actual practice. A large proportion of medical schools permit undergraduates to undertake research in conjunction with their regular work. Twenty schools allow it, two are doubtful of its value, and only two forbid it. These figures show that within the last seven years the opposition has shrunk from thirty-two per cent. to nine per cent. Undergraduate research is permitted in the medical schools of the following universities: California, Cornell, Colorado, Harvard, Illinois, Johns Hopkins, Leland Stanford, McGill, Michigan, Minnesota, Mississippi, Oregon, Rush, Texas, Tulane, Virginia, Washington (St. Louis), Western Reserve, Wisconsin, and Yale. The University of Maryland and George Washington University are opposed to it, and the College of Physicians and Surgeons (Columbia) and the University of North Carolina are in doubt as to the wisdom of encouraging it.

The chief cause of objection to undergraduate medical research is the lack of time in the course. Various schools have made it possible in different ways. California, Colorado, Illinois, Harvard, Michigan, Washington, and Virginia encourage it by the personal advice and interest of members of the faculties; Texas, Michigan, and Tulane allow undergraduates to assist members of the teaching staff; Leland Stanford, Wisconsin, and Yale require a thesis for graduation; at Rush it is given credit towards a degree; Minnesota and Johns Hopkins offer elective courses in research. Some of the schools make it possible for undergraduates to have time to undertake

research by permitting students to substitute time spent in research for hours in the regular course; others reduce the hours of instruction to such a degree that enough free time is available.

The investigation made by the undergraduate medical society of the University of Pennsylvania has shown plainly that among the majority of medical schools undergraduate research is considered justifiable by its educational value. The fact that it has greatly increased since 1912 indicates the growing recognition of its importance and the determination of many medical schools to find some method by which it can be introduced into the undergraduate course.

DISH WASHING AND THE SPREAD OF DISEASE.

The importance of careful dish washing has been demonstrated by investigations carried on at army camps. There are two general methods of cleansing the eating utensils in the army,—one by which the dishes are washed in boiling water, the other by the "old line method," in which each soldier washes his own kit in the water used by his comrades. The results of an investigation of about 66,000 troops have been reported in a recent issue of the *American Journal of Public Health*.

Where the "old line method" was used, groups of about two hundred men used common water which was never boiling, but reached a temperature of from about 100 to 120 degrees F., the bacterial content of the dishwater becoming higher as successive men used it. At Camp Stuart both systems were in use, about one thousand men eating from tableware washed in boiling water, and nearly two thousand using the older method. During the influenza epidemic, these two systems were put to the test. In the first group, the influenza incidence was 46 per thousand and in the latter, about 298. These conditions have been still further emphasized by a comparison between the incidence of disease among the men in the Officers' Training School at Camp Lee, where the men were in close classrooms but had their dishes washed in boiling water, and at other schools which were held for the most part out of doors but used the individual dish washing method. The

rate of influenza infection was found to be five times greater in the latter group. Similar facts were reported from a comparison of 12,500 soldiers at Fortress Monroe and of 800 men at Langley Fields, which showed a ratio of four to one in favor of the former where boiling water was used. Lee Hall Balloon School is one of the two exceptions to this general rule. The comparison of a total number of 33,452 using boiling water and 32,642 using tepid water has shown 1710 and 8208 cases respectively.

This investigation has been carried further and its principles applied to civil life. In restaurants and stores the rate was found to be nine and thirteen per thousand among employees where boiling water was used, compared with 240 and 84 per thousand where the hand method was employed. It would be well if these facts could be remembered and their lesson more generally heeded.

VITAL STATISTICS IN FRANCE IN WAR-TIME.

In a previous issue of the JOURNAL we have commented upon the significance of the declining birth rate in France during recent years in French Departments not included in the zone of occupation. An article in *Science* helps to complete the picture by publishing figures relating to the French civil population in occupied territory. During 1915 and 1916, there was in Lille, the largest city in occupied France, a 47 per cent. decrease in births and a 45 per cent. increase in deaths as compared with pre-war ratios. The increased percentage of deaths occurred more particularly between the ages of one and nineteen years, where it was 81 per cent. more in 1915-1916 than in 1913-1914, and among those sixty years and over, it was 85 per cent. It must be taken into consideration that large numbers of men most physically fit between the ages of 20 and 45 had been removed for military duty, and entire families among the more healthy well-to-do emigrated at the time of the invasion.

Tuberculosis, brain hemorrhages, and heart affections were the principal immediate causes of the increased number of deaths; war conditions, especially the insufficient amount and variety of food and the necessary return of aged men and women to hard labor in the

fields were the principal ultimate causes. In Charleville, an agricultural city, the same conditions have been reported, and it is fair to assume that these cities are but two examples of the birth and death rates prevailing throughout the occupied territory of France.

THIRD SURVEY OF HOSPITALS.

In the interest of the medical profession and for the sake of the community which seeks the service of the hospital, there is being conducted under the auspices of the American Medical Association a third survey of the hospitals all over the country. Considerable information has already been collected as a result of extensive correspondence, and questionnaires have been tabulated and forwarded to committees representing the state medical associations in each state. In order to check up the information gathered by the Association, the state committees also have in many instances undertaken to investigate the hospitals. The primary purpose of this survey is to provide a reliable list of hospitals which can furnish a satisfactory intern training; but the investigation is not limited to intern hospitals, for all institutions will be included in order to obtain data which may be useful in the future in classifying hospitals. The following state committees are conducting investigations in the New England States:

Massachusetts: Dr. R. L. DeNormandie, chairman; Dr. E. L. Davis, Dr. Homer Gage; New Hampshire: Dr. George C. Wilkins, chairman; Dr. E. B. Eastman, Dr. John C. Huckins; Maine: Dr. D. A. Robinson, chairman; Dr. A. S. Thayer, Dr. J. Sturgis, Dr. O. C. Davies, Dr. P. M. Ward; Vermont: Dr. Clarence H. Beecher, chairman; Dr. W. S. Nay, Dr. H. C. Tinkham; Connecticut: Dr. P. W. Bill, chairman; Dr. C. A. Tuttle, Dr. George Blumer, Dr. W. R. Steiner; Rhode Island: Dr. J. M. Peters, chairman; Dr. F. T. Rogers, Dr. W. F. Flanagan, Dr. A. H. Miller, Dr. A. H. Harrington.

The closer relationship which the hospital now bears to the public in the community which it serves makes it all the more important that the service rendered by it shall be excellent in character.

MEDICAL NOTES.

MALNUTRITION AND THE PRICE OF MILK.—A survey made by the Health Department of New York has revealed the fact that many children are deprived of milk and undernourished because of the high cost of milk. Of 11,007 families visited, 5,775 mothers have informed the health department nurses that this is true. The survey showed that 1294 children were suffering from malnutrition, 993 from anemia, 735 were under weight, 608 were suffering from miscellaneous disorders, and 3,648 were undernourished. The Dairymen's League has issued a statement disclaiming responsibility for a predicted raise of two or three cents a quart in the retail price on October 1.

DRUG PRICE CHANGES.—The following quotations have been announced in the price of drugs: Salicylates have advanced five cents a pound, making the new schedule of prices ninety cents for salol, fifty cents for salicylic acid, and fifty-five cents for salicylate of soda; formaldehyde has advanced one and one-half cents a pound; U. S. P. permanganate of potash is now selling for sixty-five and seventy cents a pound, showing an increase of five cents a pound. The leading producers have advanced U. S. P. benzoate of soda five cents a pound, and are now quoting ninety cents and one dollar a pound minimum. Quinine is selling for \$1.35 and \$1.40 an ounce, and orders cannot be filled as there is little being imported from Java or any other foreign source.

REPORT OF INFLUENZA CASES.—The report of influenza cases to the Public Health Service for the week ending September 27 includes three hundred cases. Among these are the records of fourteen states. The disease has manifested itself for the most part in a mild form. Surgeon General Blue has issued a warning that this fact should not cause individuals and city and state authorities to neglect every sanitary precaution.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending October 4, 1919, the number of deaths reported was 170 against 1,476 last year, with a rate of 11.13 against 98.13 last

year. There were 33 deaths under one year of age against 92 last year.

The number of cases of principal reportable diseases were: Diphtheria, 78; scarlet fever, 28; measles, 19; whooping cough, 9; typhoid fever, 6; tuberculosis, 46.

Included in the above were the following cases of non-residents: Diphtheria, 9; scarlet fever, 6; tuberculosis, 2.

Total deaths from these diseases were: Diphtheria 4; whooping cough, 1; typhoid fever, 1; tuberculosis, 12.

Included in the above were the following non-residents: Diphtheria, 1.

Influenza cases, 22; influenza deaths, 2. Last year, influenza deaths, 989.

THE NORFOLK DISTRICT MEDICAL SOCIETY.—A stated meeting of the Society will be held at the Massachusetts School for the Feeble-Minded, Waverley, October 28, 1919, at 12.30 P.M. Business meeting at 12.30 P.M. Luncheon, 1 P.M. Clinical talk and demonstration of cases, and Methods of training children.

WALTER E. FERNALD, M.D., Supt.
Inspection of the Institution.

The Censors meet Thursday, November 6, 4 P.M., for the examination of candidates.

BRADFORD KENT, M.D., Sec.

NEW ENGLAND SURGICAL SOCIETY, Clinical Meeting in Boston, Mass., Tuesday, October 28, and Wednesday, October 29, 1919.

Tuesday, October 28.

A.M.	
10—12.30	Operations and Demonstrations, Massachusetts General Hospital.
P.M.	
1	Luncheon, Massachusetts General Hospital.
2.30—4.30	Operations and Demonstrations, Boston City Hospital.
7.30	Dinner, Aesculapian Room, Harvard Club.

Wednesday, October 29.

A.M.	
9—10.30	Operative Clinic, Dr. W. P. Graves, Free Hospital for Women, Brookline.
9—10.30	Operative Clinic, Dr. J. T. Bottomley, Carney Hospital, Boston.
11—12.30	Operations and Demonstrations, Peter Bent Brigham Hospital.
P.M.	
12.30—1.30	Clinic, Harvard Medical School, Prof. Harvey Cushing.
1.30	Luncheon, Faculty Room, Harvard Medical School.
2.30—3.30	Reconstruction Work, Robert B. Brigham Hospital, Parker Hill.

3.45—5	Collis P. Huntington Hospital, Harvard Medical School. (Harvard Cancer Commission.)
3.45—5	Inspection of Harvard Medical School.
3.45—5	Clinic, Children's Hospital, Longwood Avenue.

NEW ENGLAND NOTES.

WAR RELIEF FUNDS.—The principal New England War Relief funds have reached the following amounts:

French Orphanage Fund	\$517,846.36
Italian War Relief Fund	306,859.47
French Wounded Fund (for the American Memorial Hospital at Rheims)	199,368.00

The Italian War Relief Fund has issued the following appeal for help for the suffering children of Italy:

"The children of Italy are calling for your help. Hundreds are stricken with tuberculosis, being entirely underfed to withstand the hardships of life. They need food and clothing at once."

ORGANIZATION OF VERMONT PHYSICIANS AGAINST INFLUENZA.—A group of one hundred physicians is to be organized by the State Board of Health of Vermont to combat influenza if the disease appears in epidemic form this year. These physicians will volunteer their services for this work and will be paid by the United States Public Health Service.

The Massachusetts Medical Society.

STATED MEETING OF THE COUNCIL, OCTOBER 1, 1919.

A STATED meeting of the Council was held at the Boston Medical Library, Wednesday, October 1, 1919, at twelve o'clock, noon, the President, Dr. Alfred Worcester, of Waltham, in the chair, and the Vice-President, Dr. A. R. Crandell, of Taunton, in attendance. The following 86 councilors were present:

BAKENVILLE.	ESSEX NORTH (continued).
W. D. Kinney.	R. V. Baketel, M.N.C.
BRISTOL NORTH.	G. E. Kurth.
A. R. Crandell, Vice-Pres.	ESSEX SOUTH.
F. A. Hubbard, M.N.C.	W. T. Hopkins, V.P.
BRISTOL SOUTH.	R. E. Bicknell.
J. A. Barré, V.P.	H. K. Foster.
W. A. Dolan.	J. F. Jordan.
ESSEX NORTH.	G. M. Kline.
J. J. O'Sullivan.	W. G. Phippen.
	Emile Poirier.

HAMPTON,

T. S. Bacon.
A. C. Eastman.
J. P. Schneider.

MIDDLESEX EAST,

G. N. P. Mead.
MIDDLESEX NORTH,
W. B. Jackson.
J. H. Lambert.
E. G. Livingston.
J. A. Mehan.

MIDDLESEX SOUTH,

H. T. Baldwin, V.P.
Richard Collins.
C. H. Cook.
John Duff.

W. E. Fernald.
C. E. Hills.

C. E. Mongan.
F. W. Rice.

W. D. Ruston.
C. H. Staples.

E. H. Stevens.
A. K. Stone, Treas.

F. R. Stubbs.
Fresenius Van Nijla.

G. L. West.
G. W. W. Whiting.

Alfred Worcester, Pres.

NORFOLK,

F. P. Denny, V.P.

E. E. Bancroft.

D. N. Blakely.

W. L. Burrage, Sec.

H. W. Dana.

C. S. Francis.

G. W. Kaan.

Bradford Kent.

M. V. Pierce.

S. H. Rubin.

L. F. Vickery.

NORFOLK SOUTH,

E. H. Bushnell, V.P.
G. H. Ryder, M.N.C.

PLYMOUTH,

W. C. Keith.

F. G. Wheatley.

SUFFOLK,

J. L. Ames.

J. W. Bartol, C.

E. S. Boland.

F. J. Cotton.

J. W. Cummins.

L. J. Cummins.

Lincoln Davis.

C. M. Green, C.

J. C. Hubbard.

D. F. Jones.

H. B. Loder.

W. A. Morrison.

F. S. Newell.

Abner Post.

Stephen Rushmore.

E. W. Taylor, C.

D. H. Walker.

WORCESTER,

W. J. Delahanty, V.P.

F. H. Baker.

W. P. Bowers.

M. F. Fallon.

Homer Gage.

E. L. Hunt.

W. L. Johnson.

G. O. Ward.

F. H. Washburn.

S. R. Woodward, Ex-P.

WORCESTER NORTH,

E. L. Fiske, M.N.C.

J. G. Henry.

A. P. Mason.

W. F. Sawyer.

Carl Ten Broeck, Rockefeller Institute, Princeton, New Jersey.

3. That the following named Fellows be deprived of the privileges of fellowship, under the provisions of Chapter I, Section 8, of the by-laws:

Frank Sumner Atwood, of Salem.
Harry Clinton Cody, of New Orleans, Louisiana.
Wadley Fadoul Courie, of Detroit, Michigan.
William Horace Davis, of Dorchester.
Thomas Brinsley Foley, of Boston.
Frank Mackie Johnson, of Los Angeles, California.
Charles Dixon Smith Lovell, of Lynn.
Patrick Joseph Maroney, of Westfield.
Theodore Edward Alexis McCurdy, of Roxbury.
John William McKean, of Worcester.
Adelbert Howard Monty, of Holyoke.
Wilson George Smillie, of Brazil.
Henry Randolph Storrs, of Vancouver, British Columbia.

4. That the following named Fellows be permitted to change their district membership without a change of legal residence, under Chapter III, Section 3, of the by-laws:

Delos Judson Bristol, Jr., from Norfolk to Suffolk.
William Duncan Reid, from Middlesex South to Suffolk.
Harry Fairbanks Hartwell, from Middlesex South to Suffolk.
John Leroy Longue, from Norfolk to Suffolk.
Irving Sobotky, from Norfolk to Suffolk.

CHARLES M. GREEN, Chairman.

The same councilor read the report of the Committee on Membership and Finance as to Finance, and it was accepted.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE, AS TO FINANCE.

The Committee on Membership and Finance makes the following recommendation as to finance:

That the affiliation with the BOSTON MEDICAL AND SURGICAL JOURNAL be continued during the year 1920, at an expense to the Society of \$3.00 for each member in good standing.

For the Committee on Membership and Finance.

CHARLES M. GREEN, Chairman.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE, AS TO MEMBERSHIP.

The Committee on Membership and Finance makes the following recommendations as to membership:

1. That the following named Fellows be allowed to retire, under the provisions of Chapter I, Section 5, of the by-laws:

Harriet Louise Harrington, 20 Monadnock St., Dorchester, with remission of dues for 1919.

Daniel Edward Keefe, of Springfield.

John Henry Kennealy of 117 Harvard St., Brookline, with remission of dues for 1917, 1918, and 1919.

Clement Willis Sparhawk, of Liberty St., Middleton.

2. That the following named Fellows be allowed to resign under the provisions of Chapter I, Section 7, of the by-laws:

George Peavey Laton, 520 West Seventh St., Los Angeles, California, with remission of dues for 1917, 1918, and 1919.

Anna Peabody Marsh, of Danvers.

Allan Joseph McLaughlin, of Washington, District of Columbia, as of December 31, 1919.

Harrington Bennett Munroe, 6372 Hollywood Boulevard, Los Angeles, California, with remission of dues for 1917, 1918, and 1919.

Joseph Shohan, of Jerusalem, Palestine, (wife's address, 123 Charlotte St., Asheville, North Carolina), with remission of dues for 1919.

Dr. H. G. Stetson presented the report of the delegation of the Massachusetts Medical Society to the House of Delegates of the American Medical Association in June, 1919, and the report was accepted with applause. (See appendix.)

The Secretary read the report of the Committee on State and National Legislation, and it was accepted.

REPORT OF COMMITTEE ON STATE AND NATIONAL LEGISLATION.

Since the Annual Meeting of the Society, the Committee on State and National Legislation has held two meetings.

At the first it was voted to oppose the plan of placing the Board of Registration in Medicine under a director, and also to favor Senate Bill No. 574, which dealt with school physicians and the appointment of directors of physical education, with the aim of improving the physical condition of the school children.

In each instance the efforts of the Committee failed. The second meeting was held jointly with the Committee on Legislation of the Homeopathic Medical

Society. Work for the coming winter was outlined and the possible employment by the Society of a paid publicity agent was discussed.

JAMES S. STONE, Secretary.

Dr. E. W. Taylor reported for the Committee on Publications and Scientific Papers. He announced that the Shattuck lecturer in 1920 would be Dr. Allan J. McLaughlin of the Public Health Service in Washington, formerly Massachusetts State Commissioner of Health. He read the following notice from the Secretary as regards medical news for the BOSTON MEDICAL AND SURGICAL JOURNAL.

Dear Doctor:—

For the purpose of procuring more medical news from the eighteen District Medical Societies for the official organ of the Society, the BOSTON MEDICAL AND SURGICAL JOURNAL, will you be good enough to send me any items of news from your district, of which you have knowledge. I now live near at hand to the printing office where the JOURNAL is published weekly, and am in constant touch in the editing of the publications of the Society, so that matter sent me can be given to the printer promptly, and I am assured that it will be published as soon as space and makeup permit.

We want announcements that Fellows have returned from military or naval service and where they are to be found; notices of appointments to office, to hospital staffs, to medical examinations or to military or civil positions; as to the hospital or nursing situation in your community; also marriages and deaths. It has been the aim of the editor to publish in the JOURNAL a suitable notice of the death of every Fellow who passes on. Data from the friends of those who knew the departed will help to make the notices fuller and better. Announcements of the coming meetings of the District Societies should be sent in early, at least two weeks before a given meeting. Abstracts of the proceedings will be welcome.

Faithfully yours,

WALTER L. BURRAGE,
Editor for the Society.

42 Elliot Street, Jamaica Plain,
September 24, 1919.
Telephone, Jamaica 469.

He emphasized the purport of this notice and said that, as a former editor of the JOURNAL, he realized how lax doctors are in sending in news items for publication. It is essential for every member of the Society to make it a personal responsibility to send in the facts as requested. He read the following vote of the Committee on Publications and Scientific Papers that had been passed at the meeting of the Committee in June:

Voted.—That the annual directory of January 1, 1920, shall consist only of the alphabetical directory, the recapitulation printed in the directory of 1918 on page 63, the notice to Fellows, and the officers and standing committees of the Massachusetts Medical Society and officers of the District Medical Societies, all the rest of the matter in previous directories being omitted for a period of three years. Also

Voted.—That the secretary's revised alphabetical list of Fellows be trued up as regards the addresses, during the months of November

and December, 1919, by means of the directories and telephone books of the cities of the Commonwealth; that the copy thus prepared be put in the hands of the printer before January 1, 1920, and the directory be published as soon after that date as possible.

He said the action was taken for reasons of economy and in order that the directory might be published more promptly. This year it appeared as a supplement to the issue of the JOURNAL of April 24, when nearly a third of the year had gone. He spoke of the frequent use that he made of the directory and asked for the opinion of the Council.

Dr. S. B. Woodward, as past president of the Society, said that he had made frequent use of the Local List. Dr. G. W. Kaan had also found it useful. He moved that the directory be published in 1920 with both alphabetical and local lists, as heretofore, and it was so voted.

Reports of committees to consider the petitions for reinstatement of G. D. McGauran, J. J. Hoban, H. P. Blodgett, R. C. Fish, G. J. Connor, J. J. Maney, and J. A. Carroll were read severally by the Secretary, and each report was accepted and its recommendations adopted by vote.

The report of the Committee on N. M. Crofts, recommending that he be not reinstated, was accepted by vote.

The Secretary read a petition of Alva H. Warren of Everett for reinstatement and the following committee was appointed to consider it: A. A. Jackson, R. W. McAllester, G. E. Whitehill.

The President nominated and the Council appointed the following committee to audit the Treasurer's accounts: C. H. Hare, Boston; C. J. McCormick, Waltham.

In the same way were appointed: Channing Frothingham as a delegate to the conference at the American Medical Association on Medical Education at Chicago, in February, 1920; and W. P. Bowers to the Conference on Medical Legislation at the same time and place.

The President nominated and the Council appointed the following as delegates to the annual meeting of the Vermont State Medical Society, October 9 and 10, 1919: H. G. Rockwell of Amherst, and G. D. Weston of Springfield.

Dr. J. W. Bartol moved and it was seconded and voted that the Committee on Medical Education and Medical Diplomas be instructed to revise the list of medical colleges, diplomas from which are accepted by the Council from candidates for fellowship.

Dr. A. K. Stone called attention to a suggestion which had been made that a legislative agent for the Society be obtained and he moved that the privileges of the floor be accorded to Dr. J. B. Hawes, 2d. The motion being put was carried unanimously and Dr. Hawes addressed the Council. He said that since 1907

he had been in close touch with legislative affairs at the State House, especially in the matter of tuberculosis. He had attended many hearings in regard to health matters, and after a great deal of thought he had come to the conclusion that the Massachusetts Medical Society is not the force which it should be at the State House and that the methods now employed are not the best ones. He had seen the highest type of medical man insulted by members of the legislature. He believed in publicity and thought that ignorance of our medical needs is really the cause of the action of the legislators toward physicians, who, he thought, are ignored. He mentioned a specific instance and suggested that the Legislative Committee be empowered to obtain the services of a man for part time who knows journalism and who is able to educate the representatives and the public as to the needs of the medical profession.

Dr. E. H. Stevens thought that this matter ought to be endorsed and he moved that such a legislative agent be employed by the Committee on State and National Legislation. The motion being put was seconded and carried unanimously, after the President had stated that the proposition had been submitted to a joint meeting of the Committee on State and National Legislation with a similar committee of the Massachusetts Homeopathic Medical Society, and had been improved.

Dr. Samuel B. Woodward made the following remarks: "Before this matter is over, as I have been interested in legislative matters for a long time, I should like to defend the members of the legislature in general from the statement that as a rule they have been insulting to the medical profession. Now, I have been to the State House continuously for three years and have been in touch with legislation and have got a good deal of help from legislators. I know that insulting remarks have been reported to have been made to physicians by legislators, but as for me, I have been helped by members of the legislature, and members of the legislature have helped me, not from any personal reasons, but I am fully convinced they did it because I was president of the Massachusetts Medical Society. I think the Massachusetts Medical Society has a good deal of influence before the Legislature, and I would like to say that we are not ignored. I will say that requests have come to me from the executive office for opinions on many matters, and I think the Massachusetts Medical Society has a pretty good standing."

Dr. F. J. Cotton said he had been asked to bring up a matter that seemed to be of importance, namely: that the Board of Registration in Medicine, acting under the Act of the Legislature of May 2, 1917, have summoned several of the fellows of the Society before the Board and have penalized them. He said that there was a wide feeling of unrest in the community and a feeling that the members of the profes-

sion are in danger of being brought before the said Board of Registration in Medicine on trumped-up charges by people who will not pay their bills, and that just at present there was a tendency on the part of lawyers to victimize the doctor, that we were going through a stream of malpractice suits in this State and the feeling was that there is a campaign being waged, that if a man has been brought up for acts for which he is blameless, it would render his defense in civil suits more difficult. He moved that the privileges of the floor be extended to Dr. W. H. Robey, Jr. The motion was seconded by Dr. W. P. Bowers, who acknowledged that there had been a good deal of criticism relating to Chapter 218 of the Acts of 1917 and thought it was the time and place for any criticism to be presented. The motion being put was carried unanimously. Dr. Robey described the facts as he knew them of a young man who was a graduate of the Boston City Hospital, a satisfactory house-officer and a recent member of the Massachusetts Medical Society. His character and record were without blemish, so far as he knew. He had been called to attend an old lady suffering with influenza during the recent epidemic, and while attending the wife had been asked to see her husband. He took the man's temperature and prescribed a course of treatment. His bill was disputed on the ground that he had not given the man proper examination, although the wife's treatment was satisfactory. The bill was reduced in amount by agreement, and finally paid. Then the physician was summoned before the Board of Registration in Medicine and, after a hearing, his license was taken away for a period of two months on the ground of extortion. Dr. Robey was of the opinion that the penalty was excessive and that the law might act as an injustice to members of the profession, in that they would be called upon to appear before the Board of Registration and defend themselves of charges which had an insufficient basis. Dr. Bowers took the floor and defended the Act as vital to the safety of the public and to the interests of the medical profession. He recited the full facts in the case referred to and said that the Board had held four hearings in the matter, that the physician in question had not made a proper examination, simply placing a thermometer in the patient's mouth and making no physical examination, prescribing the same treatment that the wife received. The physician had not told the truth in several specified instances and the Board had been unanimous in its finding. He read provisions of Chapter 218 of the Acts of 1917 and defined the word *extortion*. The Board felt that the evidence showed that, under the circumstances, the physician had "made an undue exaction," one of the dictionary definitions of "extortion."

The action of the Board was supported by Dr. M. F. Fallon and Dr. C. H. Cook, two other

members of the Board of Registration in Medicine, and by Dr. J. L. Ames. A vote of confidence in the Board of Registration in Medicine was suggested, and finally seconded and carried unanimously.

Dr. H. W. Dana said that when the Harrison Narcotic Act was first put into effect for the purpose of preventing the illicit use of drugs, the fee was one dollar, that under the amendment to the Act passed in 1919 the fee had been increased to three dollars a year. He thought that the amount was too much and introduced the following resolution:

Resolved: "That taxation for the purpose of obtaining revenue, of the medical profession as a class, provided for by the Harrison Narcotic Act as amended in 1919 by Congress to provide additional revenue, is illogical, inequitable and undesirable.

That for the purposes of the Harrison Narcotic Act, the payment by each doctor of a yearly registration fee of twenty-five cents would suffice.

That this Society deprecates the taxation for revenue of physicians as such, and urges upon its representatives in Congress, the reduction of the amount of the Narcotic Registration Tax from the present sum of three dollars, to the sum of twenty-five cents a year."

The resolution was seconded by Dr. Kaan and on motion by Dr. A. K. Stone it was referred by vote to the Committee on State and National Legislation for a future report to the Council.

Dr. W. A. Dolan of Fall River said that at a meeting of physicians in Fall River, called for the purpose, the question was brought up of specialists coming from out of town to examine, pass upon, and criticize the findings in cases which were being treated by the physicians of Fall River, at the instance of insurance companies and without notifying the men in charge of the cases. He called attention to Article IV of the Code of Ethics of the Massachusetts Medical Society, namely:

"Physicians in their professional relations should be governed by strict rules of honor and courtesy. Their conduct toward each other should be such as to secure mutual confidence and good will.

"They should not consent, except in cases of pressing emergency, to take charge of a patient when another is in attendance, until such attendant has been notified."

He moved that, in the opinion of the Council of the Massachusetts Medical Society, the provisions of said article appertain to the examination of cases for the Industrial Accident Board as well as to private cases, and that no examination should be made by a physician for such Board without notifying the attending physician.

Dr. C. H. Cook said that he had had an opposite experience, that the physicians who came

to see cases under his care invariably asked him to accompany them in the examination of the patient.

Having been duly seconded, Dr. Dolan's motion was passed.

The Treasurer asked for a vote on the amount of the annual dues of the Society for the year 1920, and on his motion it was voted that the dues for the ensuing year remain at six dollars.

Adjourned at 1.50 P.M.

WALTER L. BURRAGE, *Secretary*.

APPENDIX TO PROCEEDINGS OF THE COUNCIL, OCTOBER 1, 1919.

REPORT OF DELEGATION FROM THE MASSACHUSETTS MEDICAL SOCIETY TO THE MEETING OF THE HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION, JUNE 9-13, 1919.

Your delegates to the recent meeting of the American Medical Association, held at Atlantic City in June last, beg leave to submit to the Council the following report of the meeting:

The Massachusetts Medical Society is entitled to five members in the House of Delegates of the American Medical Association. The regularly appointed delegates to the Atlantic City session were: Dr. S. J. B. Blake, of Boston; E. F. Cody, of New Bedford; F. B. Lund, of Boston; H. G. Stetson, of Greenfield; and L. F. Woodward, of Worcester. Of these, Drs. Blake and Stetson were present. Dr. Woodward was not present, his seat being occupied by his alternate, Dr. J. F. Burnham, of Lawrence; Dr. Lund was unable to be present and his seat was occupied by his alternate, Dr. W. H. Robey, of Boston; Dr. Cody was not present nor did his alternate appear at any of the meetings of the House of Delegates.

The custom inaugurated last year was again followed this year, most of the work of the House of Delegates being done during the first two days of the week and preceding the regular scientific meetings of the Association, the opening general meeting coming on Tuesday evening instead of on Tuesday morning, as was formerly the custom. Following this were three days of scientific section meetings, the final meeting of the House of Delegates for the election of officers and the closing business coming on Thursday afternoon.

From the report of the Secretary, it was learned that the membership of the Association on May 1st last was 82,288, this being the membership of the various state associations which compose the American Medical Association. The Fellowship of the Association on May 1st last was 45,412, a net increase during the year of 697.

The Trustees report that the circulation of the *Journal* at the end of the calendar year was about 70,000. Of the special journals published by the Association, the *Archives of Internal Medicine* has a circulation of 2600 and the *American Journal of Diseases of Children* a circulation of about 2100. They also report that during the year the Association has begun the bi-monthly publication of a Spanish edition of the *Journal* for circulation in Central and South America and this promises to be successful. Recently also the Association has begun the publication of the *Archives of Neurology and Psychiatry*, and on May 1st last this journal had a subscription list of nearly 900. The Association also publishes the American Medical Directory and the

Quarterly Cumulative Medical Index, both of which have been carried on at a loss during the past year.

The Treasurer's report shows the Association to be in a sound financial condition, having a plant and equipment account of about \$300,000, materials, accounts receivable, miscellaneous and cash on hand of about \$175,000, and reserve fund account of over \$200,000.

Dr. Alexander Lambert, the President elect, in his address before the House of Delegates, pointed out very forcibly the unsuccessful manner in which the United States is endeavoring to control the use of opium and the hardship and annoyance it is imposing upon physicians as a whole because of the actions of "a few renegade and depraved members of the profession who, joining twith the commercial class, make it possible to continue the evil and illicit drug trade." In order that the purpose of the law might be carried out, it was his suggestion that the American Medical Association request the Internal Revenue Department to call together a conference composed of representatives of the medical profession, the wholesale and retail drug interests and representatives from each state, with the belief that such a conference, through the co-operation and concerted action of all interested parties, might be of great value in establishing more complete and just control of the sale of opium and its alkaloids. This suggestion of Dr. Lambert's was carried out by vote of the House of Delegates, the vote further authorizing the speaker of the House of Delegates to appoint a committee of three to represent the American Medical Association, if such a conference were called.

The Judicial Council, acting under its authority to investigate general professional conditions and all matters relating to the relations of physicians to one another and to the public, makes a report of its investigations relating to Age and Disability Insurance for physicians. The Council has been informed that actuarial statistics bear out the following statement, namely: That on the average of 100 individuals entering on a business career at the age of 25, when these have reached the age of 65 years, five of the 100 will be in comfortable circumstances, financially; six will be self-supporting; fifty-three will be receiving financial assistance of some form; the balance will be dead. It should be recognized that these figures are not limited to professional men, but include those from all walks of life. Nevertheless, in the opinion of the Council, they warrant a further investigation and study of the advisability of undertaking some organized effort for the relief of members of the medical profession who are in financial distress because of age or other physical disability. Should the investigations of the Council warrant it in doing so, a further report will be submitted to the House on this subject at a future annual session.

A most excellent report was that of the Council on Health and Public Instruction made by its Chairman, Dr. Victor C. Vaughn, of Michigan, who needs no introduction. This report was a résumé of the work of the Council since its beginning in 1910, followed by a discussion of the future work of the Council. Very little has been done by this Council in the line of new and original work during the past two years owing to war conditions and the fact that its entire personnel was in the service. With the return to civil life of its members, it is now planning to take up work on national lines that should lead to improvements in many matters pertaining to general health. The report merits careful reading and thought.

For many years the report of the Council on Medical Education to the House of Delegates has been a most complete study of the present day problems of medical education. The report of the Council this year made by Dr. John M. Dodson, the Chairman, measured up to the high standard of previous

years in every way. To any one interested in medical education, as all physicians should be, it is valuable and interesting reading. It should be more generally and carefully read than it is likely to be. In no other way is it possible to know the enormous amount of work which has been carried on throughout the country concerning the details of medical education, or to understand the very great advances in medical standards which have resulted in consequence of the work of this Council. In this year's report much more attention has been given to the study of hospital standardization than has been included in some previous reports. The Council is taking up this matter with reference to the relationship of hospitals to interne service, endeavoring to raise the standard of teaching of internes. The Council recognizes the complaint which comes from rural committees, that physicians as trained at the present day are finding that they cannot afford to settle in country districts, that the income is not sufficient to give even a reasonable return on the cost entailed in obtaining this education. The Council does not, however, believe that the rural communities are going to suffer; it believes that these communities will not only have sufficient physicians for their needs but better trained physicians. In this connection, it may be well to quote from the opening address of the speaker of the House of Delegates, Dr. Hubert Work, of Colorado, a very keen, broad-viewed man, in which he says: "It is evident that the relentless pressure of this Association for higher college and professional standards, with their time and financial exactions on the one side and the decrease in disease through preventive medicine on the other, are grinding between them students and physicians of average opportunities. Medical requirements for practice demand at least seven years of schooling beyond the high school. In some universities, two degrees and nine years' time are demanded for graduation. That included in the average medical college curriculum costs so much time and money that only the rich can attain it. The crossroads communities will soon have no qualified physician, and from necessity will revert to the opportunist and midwife. Should undergraduate schools undertake to finish specialists in medicine, presumably the function of postgraduate schools? The primary function of a physician, to cure the sick, is submerged by the scientific ambition to diagnose rare diseases or a few ailments, with an inevitable loss of perspective necessary to the accomplished diagnostician. Failure to gain practical knowledge of the simple things in medicine tremendously deprecates recent graduates. American medical colleges are graduating medical scientists, and our hospitals, nursing specialists, both technicians and both out of reach of the family of average means."

Another chapter was added to the subject of Social Insurance by the report of the subcommittee of the Council on Health and Public Instruction, made by its Chairman, Dr. Alexander Lambert, of New York. This committee is composed of Dr. Lambert, Chairman; Dr. M. L. Harris, of Chicago; Dr. F. L. Van Sickle, of Pennsylvania; and Dr. S. S. Goldwater, of New York; and practically carries on the investigation of this subject previously conducted by the Council itself.

Dr. Vaughn, the Chairman of the Council on Health and Public Instruction, in referring to the subject of Social Insurance, makes the following remarks: "The introduction during the last two sessions of our legislature of bills providing for health insurance and the appointment of commissions to study this subject in a number of states, notably California, Illinois, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin, and the introduction of a bill in the New York legislature, all combine to make this question one of the vital issues now before the medical profession. No state has as yet

adopted social insurance. In New York the bill endorsed by Governor Smith passed the Senate but failed to pass the house. In California, the bill recommended by the state commission was on referendum defeated by a large popular vote. In Wisconsin, the commission reported against the proposition. In Ohio, the commission was in favor of limited social insurance. In Pennsylvania and Illinois, the commission recommended a continuation of its activities and further study of the question. The growing interest shown in this subject during the last two years, however, makes it all the more important that careful attention should be given to it by physicians, both as individuals and as a profession. The attitude of the majority of physicians up to date has been one of unqualified and often unreasoning opposition, without any effort to study the question or to consider the arguments put forward in favor of the proposed plan. Unreasoning opposition or sweeping and often erroneous general arguments against the measure will not prevent its adoption nor will it enhance the influence of physicians. It is of the utmost importance to the medical profession at present that we give this question the most careful, painstaking, patient, and disinterested study; that we qualify ourselves as authorities instead of allowing this function to be exercised by the active proponents of social insurance. To this end it is particularly necessary that we study this question dispassionately and critically, discriminating between fundamental principles and nonessential details.

"The report of the subcommittee deals largely with further information upon the subject, adding to that previously given to the House of Delegates in each of the past four years. It is a very exhaustive and complete report and is one that should be studied very carefully by physicians in general, whatever views they may hold upon the subject. The conclusions of the report are pointed and forceful and should be brought to the attention of this audience for your serious thought. "The economic problems of the profession are greater and more than can be solved by the individual physician today. It, therefore, becomes the duty of organized medicine to take this burden and aid in its solution for the best interests of all and to bear the burden of solution if the individual cannot bear it. This must be done through the organization of the American Medical Association, of the state association and of the county societies, all working in harmony for a common purpose. The actual every day work of the solution must be taken in hand and borne by the county societies and the state associations and they must wake up to their duties vastly more than they ever have before for the sake of their own profession. This will require an intelligent reading of at least the reports published by the American Medical Association on the various forms of health insurance and other economic questions. Intelligent action can be based only on intelligent knowledge and until individual physicians will take the trouble to read and inform themselves on this subject, they are bound to act through ignorance and prejudice to their own injury. This committee recommends that the Judicial Council and the Council on Health and Public Instruction continue their joint action in studying these economic questions. The committee further recommends that the House of Delegates request each constituent association to appoint committees to study the subject and to keep their component societies informed on these questions, that the medical profession be not caught unawares as it was when the Workmen's Compensation Laws were passed, and that these committees investigate local economic conditions and report the results of their studies to the special committee of the American Medical Association. The committee further recommends that before all legislatures, in which laws on social insurance are being considered, representatives

from the profession shall demand the opportunity to help mold these laws so that the public shall not be deprived of the best medical care and so that full justice shall be given to both the public and the profession."

Your delegates are pleased to report to you that through their efforts a member of this Society, Dr. David L. Edsall, of Boston, was elected as first Vice-President of the American Medical Association. It also takes this occasion to record its pleasure in aiding in the reelection of Dr. D. Chester Brown, of Danbury, Conn., to the Board of Trustees of the Association, Dr. Brown practically representing New England on the Board.

The House of Delegates of the American Medical Association is composed of about 150 members, representing not only parts of the country but all the different lines of medicine that one can possibly imagine. After a continuous service of seven years in the House, I am more and more impressed with the amount and character of work accomplished by the Association; that its ideals are constantly growing better and that it is trying to live up to its ideals, there is no question. There are many men active in the Association who realize that the Association should stand for more than the reading of scientific papers, men who realize very clearly not only the very great work which the Association has accomplished for medicine in the past but also recognize with an equally clear vision points where the Association has not accomplished all that it should, or perhaps not accomplished anything at all, and they do not hesitate to call attention to these errors of deficiency occasionally and in no uncertain way. New ideas and thoughts are constantly being brought forward and considered carefully, and constant work of a high order is constantly being carried on by the Association through its Councils and committees, encouraged and sponsored by its officers and the House of Delegates. To such men as Bevan, Dodson, Dyer, James Moore, Vaughn, Councilman, and a host of others, the Association owes much. The annual reports of the Council on Medical Education, on Health and Public Instruction, together with a study of the work carried on by the Council on Pharmacy and Chemistry from year to year, illustrate very forcibly the amount and the character of work that is constantly being undertaken and carried on by this great national Medical Association. Every effort should be made to bring about a closer relationship between the national Association and the various state societies; there should be a more intimate knowledge of what the national Association is trying to do, and state associations should be ready and eager to offer support and encouragement to the work, or what perhaps is of equal value, be ready to offer just and fair criticism of work or methods in the broadest spirit through proper channels. The opposite is equally true, that work of the various state societies having a national interest should, without hesitation, be brought to the attention of this national organization. In other words, there should be complete cooperation between the state and national organizations in the broadest kind of way. In no other way can medicine or any other object attain its highest perfection.

Respectfully submitted,

HALBERT G. STETSON.

For the Delegates of the Massachusetts Medical Society to the American Medical Association.

DR. GEORGE L. WAKEFIELD, who had been practicing in Manchester, N. H., for the past 25 years, died on October 3, at the Elliot Hospital, at the age of 72 years. Dr. Wakefield was born in Plymouth, Vt., and served with a New Hampshire regiment in the Civil War. In 1870 he was graduated from Hahnemann Medical College at Chicago, and began practicing in Manchester in 1889.